



MISSOURI TIMBER PRICE TRENDS

April-June, 2014, Vol. 24 No. 2

Missouri Department of Conservation, Forestry Division

Doyle (North) Stumpage Prices

	High	Low	Avg.	Last Qtr.	Last Yr.	Vol.	# of Rpts.
Veneer							
Walnut, Black	\$5,600	\$1,310	\$3,555	\$3,815	\$3,155	79 Doyle - MBF	27
White oak (group)	\$2,500	\$1,250	\$1,495	\$1,295	-	60 Doyle - MBF	5
Sawlogs							
Hard Maple	\$440	\$80	\$180	\$180	\$90	24 Doyle - MBF	5
Hickory	\$440	\$100	\$120	\$145	\$95	74 Doyle - MBF	12
Mixed Hardwoods	\$280	\$50	\$85	\$105	\$145	1,006 Doyle - MBF	29
Oak (mixed species)	\$305	\$80	\$225	\$285	\$155	699 Doyle - MBF	7
Post Oak	\$120	\$90	\$100	\$120	\$170	11 Doyle - MBF	5
Red oak (group)	\$360	\$50	\$125	\$155	\$120	1,822 Doyle - MBF	27
Soft Maple	\$220	\$120	\$155	\$190	\$190	81 Doyle - MBF	5
Walnut, Black	\$2,000	\$450	\$1,250	\$1,530	\$1,325	167 Doyle - MBF	29
White oak (group)	\$450	\$60	\$180	\$230	\$210	1,989 Doyle - MBF	30
Stave Logs							
White oak (group)	\$1,440	\$400	\$785	\$515	\$240	614 Doyle - MBF	20

International (South) Stumpage Prices

	High	Low	Avg.	Last Qtr.	Last Yr.	Vol.	# of Rpts.
Sawlogs							
Hickory	\$310	\$70	\$180	\$180	\$170	251 Int. - MBF	22
Mixed Hardwoods	\$1,380	\$95	\$135	\$140	\$225	38,934 Int. - MBF	20
Oak (mixed species)	\$485	\$75	\$205	\$175	\$175	3,934 Int. - MBF	28
Post Oak	\$250	\$75	\$160	\$155	\$125	120 Int. - MBF	11
Red oak (group)	\$380	\$160	\$280	\$265	\$240	4,446 Int. - MBF	20
Shortleaf Pine	\$310	\$50	\$75	\$75	\$125	872 Int. - MBF	12
Walnut, Black	\$570	\$125	\$505	\$125	\$680	21 Int. - MBF	3
White oak (group)	\$380	\$160	\$230	\$220	\$230	1,272 Int. - MBF	26
Stave Logs							
White oak (group)	\$650	\$415	\$560	-	-	89 Int. - MBF	6

Published timber prices are based on a rolling average of reports received over the last four issues - that is, one year. Refer to the column headed “# of Rpts.” to get a gauge of how accurate the average prices may be. (“# of Rpts.” refers to the number of sales including a particular species and may sum to more than the number of sales.) Changes since last quarter and last year should be read with caution as the number of reports varies each year and quarter. This report can only be used as a general guide for determining market value of timber. General market and economic conditions, as well as local considerations such as accessibility, terrain, sale size, and tree size and quality also affect the price paid.

Please see the map on page 7 for a definition of reporting regions, which have changed.

All prices and volumes are reported in either International ¼” MBF Scale or Doyle MBF, depending on the region of the state.

To convert volume from Int.-MBF to Doyle MBF, divide by 1.2. To convert prices from Int.-MBF to Doyle MBF, multiply by 1.2.

To convert from MBF to BF (prices or volume), divide by 1,000.

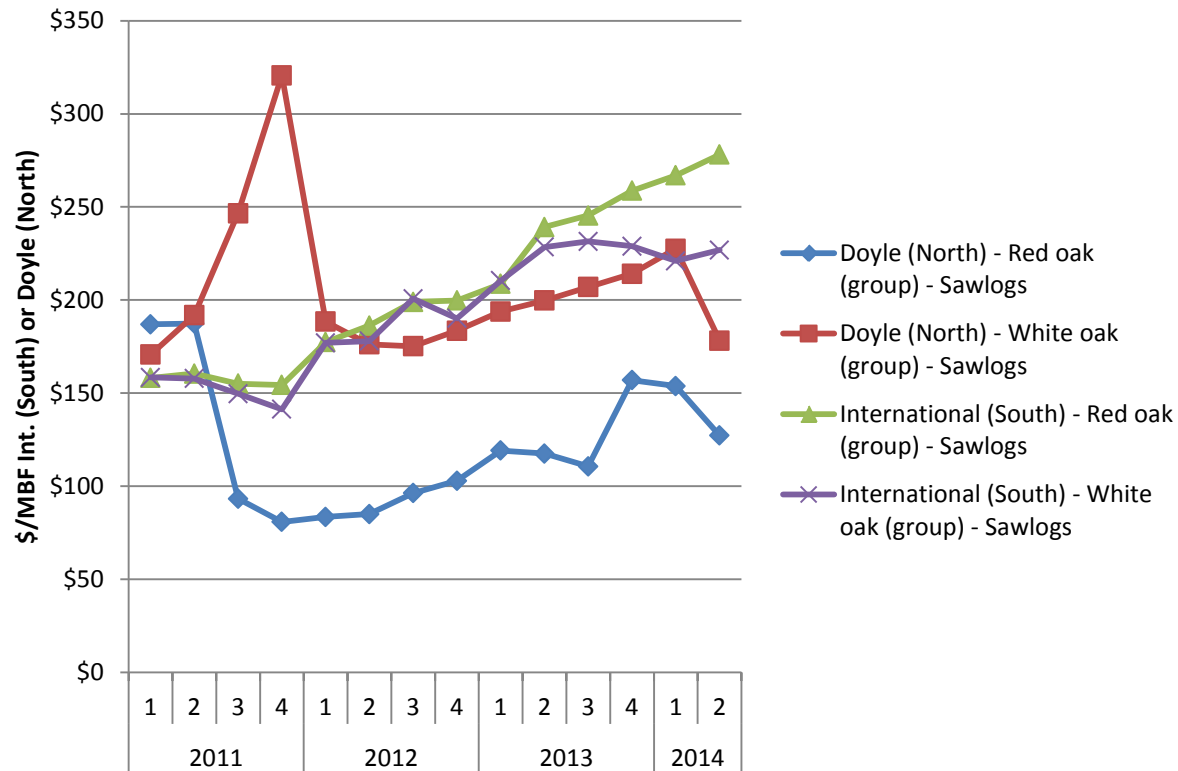
Foresters reported stumpage prices resulting from 118 timber sales containing 57,963 MBF located throughout the state. There were 95 reports from Private lands, 22 reports from MDC lands and 1 reports from other lands. There were 69 reports from MDC foresters, and 48 reports from Consultant foresters. We would particularly like to thank these Consulting Mr.’sForesters: Fleming, Lohmann, Meyers, Kinerk, Dwyer, Lumb, Schmollinger, Suchland, Yarnell, Barnickol, Cunningham, Deschu, Enyart, Hefner, Jones, Riggle and Stanton.

Editor’s Note

Remember that one of the most valuable sources for information on log and timber markets is the local Missouri Department of Conservation Resource Forester or your Consulting Forester. Contact the nearest Forest District office for up-to-date, local advice. The Missouri Department of Conservation's Forestry Division, (573) 751-4115, will be happy to provide you with the name and address of the Resource Forester or MDC Regional Office nearest to you. You can locate a Consulting Forester by visiting the Mo. Consulting Forester's Association web site at: www.missouriforesters.com or by visiting the Private Land Assistance page of the MDC website <http://mdc.mo.gov/landown/> and clicking on the “Conservation Assistance Contractors” link.

Tom Treiman and Jason Jensen, Editors

Timber Price Trends



The United States Forest Service (USFS) reports the following from sales on the Mark Twain National forest:

County	Product	Species	Price per MBF
Butler County	Sawtimber	Mixed Hardwood	\$279
Carter County	Misc.	Mixed Hardwood	\$67
	Posts	Pine	\$14
	Sawtimber	Mixed Hardwood	\$239
		Pine	\$94
Howell County	Posts	Pine	\$32
	Sawtimber	Mixed Hardwood	\$219
		Pine	\$34
LaCledde County	Misc.	Oak	\$21
	Sawtimber	Oak	\$230
Ripley County	Misc.	Mixed Hardwood	\$74
	Sawtimber	Mixed Hardwood	\$229
		Pine	\$138
Washington County	Posts	Pine	\$37
	Sawtimber	Oak	\$225
		Pine	\$103
Wayne County	Sawtimber	Oak	\$315
Wright County	Posts	Pine	\$8
	Sawtimber	Pine	\$27

The Word on the Street

By Jason E. Jensen, CF

Markets for every species and every product class are good. This is good news for landowners who may have been waiting for markets to improve. Demand for nearly all products is good. Markets are currently good for every species of wood that we grow in Missouri including hickory, maple (both hard and soft), and cottonwood. Stave quality white oak and every grade of walnut continue to be in high demand. Red oak markets in the northern part of the state are good. Pine markets have been improving as well. There is a variety of pine products being sold including posts, poles, shavings logs, cants, and even an increasing number of pallets being built from pine. This is good news for landowners with pine. Pine markets have been sporadic at best for the last 15 years or more. A sustainable pine market is critical to maintaining the health and productivity of much of our southern Missouri forests. I've also had several requests from mills looking for cedar. Although often looked at as a weed, cedar is a valuable species and actually lends itself to potentially more value added opportunities than any other species that we have in the state.

In the southern part of the state, markets for nearly all products and species are good. Every product is in high demand. Grade markets have improved to the point where there may even be a few railroad ties being sawn down into lumber. As a result, tie prices have been increasing in value as well.

Flooring and pallet markets continue to be strong as well. Competition is intense for standing timber in the southern part of the state. Competition has driven stumpage prices up in many areas. It is not uncommon to have eight or more bidders for timber sales in several southern counties. This can be a double edged sword. It is good if you are a landowner selling standing timber because increased competition equals increased prices. It can also be bad since increased pressure is placed on the forest resource.

Burning wood for energy ignites debate over carbon emissions

BY HEIDI LI

COLUMBIA — On an average weekday, 16 tractor-trailers drive to MU's combined heat and power plant and two or three to Columbia's Municipal Power Plant, each delivering 25 tons of wood chips.

To reduce reliance on coal, the MU Power Plant started burning wood chips in 2006, and the city followed suit in 2008, burning wood chips in the summer and winter when demand for electricity is highest.

MU also built a biomass boiler last year that burns only wood chips.

About 90 percent of the wood chips that go to both plants comes from sawmill residue within 100 miles of Columbia, said Hank Stelzer, associate professor of the MU School of Natural Resources. The other 10 percent comes from

whole trees cut from forests within 50 miles of town, as well as residue from commercial harvests.

The Environmental Protection Agency lists [biomass, including wood chips and other plant materials](#), as a type of renewable energy that can help eliminate greenhouse gases. There are questions, however, about whether burning whole trees from forests actually reduces carbon in the atmosphere.

Some people regard burning biomass as environmentally friendly because, unlike coal or oil, trees can regrow and recapture the carbon they release when other trees are burned. Others believe cutting and burning whole trees might not only reduce the size of sustainable forests but also increase the time it takes remaining trees to recapture carbon.

Carbon neutral?

As the major source of greenhouse gases, [carbon emissions come mostly from electricity generation](#), according to the EPA. Thus, "carbon neutrality" has been widely acknowledged as a standard for renewable energies. "Carbon neutral" means a power plant produces zero net carbon emissions by either offsetting the amount of carbon it releases or buying carbon credits to make up the difference.

MU uses the campus carbon calculator designed by [Clean Air-Cool Planet](#) to track its carbon emissions every year, said Meredith Elbaum, a sustainability consultant in Boston who helps

MU update its annual climate action plan.

Some people regard burning wood chips as a carbon-neutral approach because they think the carbon released from burning wood chips can be offset.

According to [the calculator's user guide](#), previous versions of the calculator regarded biomass as carbon neutral. When trees die, they release carbon into the atmosphere. As other trees grow, that carbon will be recaptured by photosynthesis. Thus, the total amount of carbon in the cycle doesn't increase.

What's more, according the guide, the carbon released from burning fossil fuels has been kept in the ground for millions of years, whereas the carbon emitted from burning wood chips adds only small amounts of carbon to what already exists.

Some scientists, however, say that although wood is a renewable resource that can regrow and recapture carbon, it is not carbon neutral.

The current carbon calculator doesn't treat burning wood chips as carbon neutral, but it does calculate carbon emissions from wood separately from fossil fuels, said Anna Pautler, the former campus program associate for Clean Air-Cool Planet, in an email.

Trees are about half carbon, and when they are burned, the carbon is released into the atmosphere as carbon dioxide. Whether the carbon can be offset by the regrowth of trees depends on

many factors, such as the type of wood burned, the amount of wood harvested and so on, Pautler said.

Carbon emissions

Environmental experts also cast doubt on whether burning whole trees reduces carbon emissions.

One of the major concerns is that the regrowth of trees is not guaranteed and that it takes time, said Sasha Lyutse, policy analyst at the [Natural Resources Defense Council](#). Based on the latest scientific studies from around the country, she said it can take from 35 to 100 years to recapture carbon.

Our lands can be huge "carbon sinks," which means they absorb carbon dioxide in the atmosphere and store it in forests and soils, Lyutse said. Cutting and burning trees to produce energy can damage forest carbon sinks, allowing more carbon to be released into the atmosphere.

According to an EPA report, [forests offset about 15 percent of total U.S. greenhouse gas emissions](#) in 2012. Lyutse said we need more forests to help offset carbon emissions. Cutting and burning whole trees for energy adds a lot of carbon to the air, Lyutse said, and some studies show that it can also disrupt forest soil, creating additional carbon emissions.

There are alternative sources of biomass fuel that contain less carbon and include wood waste, reclaimed wood and timber harvest residues such as tree tops and limbs, Lyutse said. About 90 percent of the wood chips that MU

and the city use to produce electricity fall into this category.

Both the MU and city power plants buy their wood chips from [Foster Bros. Wood Products](#) in Auxvasse. Ten percent of the wood for both power plants comes directly from forests in central Missouri, and the company cuts only trees that are marked by a forester trained to improve timber stands, Foster Bros. Vice President Steve Foster said. The trees that are cut are unhealthy and would likely die before the forest is harvested again, Stelzer said.

Forests managed by the company are harvested about every 15 years, Stelzer said. On a typical acre of forest that is harvested, 40 percent of the wood is taken for traditional wood products, such as lumber, flooring and pallets. Another 20 percent of the wood is harvested as biomass for producing energy, and the other 20 percent is left to grow for the next harvest, Stelzer said.

"We don't clear the land. We harvest what needs to be harvested, so we leave it in intact forests," he said. "Because we want to be sustainable and come back in another 15 years."

The amount of energy available from wood chips is by weight only about half that of coal, so the new biomass boiler at the MU Power Plant has to burn a large amount of wood chips, Stelzer said. It now burns about 120,000 tons annually, Stelzer said.

The city power plant burns 9,932 tons of wood chips per year.

One-third of Missouri's 45 million acres is forest, mostly oak and hickory trees. Given the amount of the wood chips cut from whole trees that goes to the MU Power Plant, about 800 acres of forests in mid-Missouri are sustainably harvested to provide biomass to the power plant every year, Stelzer said.

How boilers work

About 12.5 percent of the city plant's total carbon emissions came from burning wood last year, said Christian Johanningmeier, power production superintendent for the [Columbia Water and Light Department](#). The city power plant produced 66,661 megawatt-hours, which was 5.6 percent of the city total energy usage last year, and burning wood chips contributed about 13.4 percent of its total generation, he said.

Every winter and summer, the city power plant burns coal, wood chips and natural gas in its boilers to supplement the bulk of electricity it buys from outside Columbia and to meet the city's power demand in peak seasons, Johanningmeier said.

The two solid boilers at the city power plant are like two four-story-high metal boxes, in which coal and wood chips are burned. Each boiler is connected to a stoker, which pours solid fuels into the boiler fire. As the fuel burns, water inside the pipelines aligned on the walls begins to boil into steam.

The steam rises inside the boiler and is funneled toward a turbine that, in turn, is connected to a generator. Pressure from the steam

spins the turbine, causing the generator to produce electricity.

The boilers at the MU plant work the same way, except that MU's new biomass boiler burns only wood chips.

The MU plant is capable of producing electricity for the entire campus. Its [Combined Heat and Power Plant](#) is nearly twice as efficient as a typical plant that does not use its excess steam to heat and cool buildings, Campus Facilities spokeswoman Karlan Seville said.

While the biomass boiler burns only wood chips, four others burn a mix of mostly coal with some wood chips added. The plant also uses natural gas during summer months, when natural gas prices are lower.

"The biomass boiler we put in a year ago reduces our dependence on coal and will be key in helping achieve the campus' sustainability goal of reducing the plant's coal use by 75 percent by 2017," Seville said.

MU reduced its carbon emissions by 28 percent from 2008 to 2013, and Seville estimated most of that was the result of the new biomass boiler. Because the boiler hasn't been operating for the entire fiscal year, it's impossible to say exactly how much it has reduced emissions.

Policy conundrum

Policy incentives for burning wood for energy might also lead to an increase in carbon emissions.

Traditionally, the number of bio-power plants, which burn only biomass, is affected by the forestry industry of an area, said Thomas Johnson, MU professor of agricultural and applied economics.

For example, a report by Biomass Magazine says that [Minnesota has 11 biopower plants, while Missouri has none](#).

"Because Minnesota has more forestry resources, they tend to have more biopower plants," Johnson said. "In addition, there may be more government incentives in Minnesota than in other states."

Governments offer both financial and regulatory incentives, Johnson said.

If those incentives don't take into account the possible harm that burning wood can bring to forests, there's a risk that the demand for burning whole trees will grow, Lyutse said.

"You build the demand and create this incentive that will go beyond the potential (sustainable) case."

There are alternatives to burning whole trees. MU has tested corncobs and switchgrass, but it is sticking with wood chips for now.

"If the market opens for other products, we could consider those, too," Seville said.

The city power plant tried miscanthus pellets, but Johanningmeier said they didn't work out. Miscanthus is a high-yielding grass.

"Miscanthus pellets turned into powder before they reached the stokers," Johanningmeier said. The city stopped testing them because of the possibility that miscanthus might ignite other fuels in the stoker before they reach the boiler where they're supposed to burn.

The city began burning wood chips again June 3.

Johanningmeier said it also plans to work with a local company, [Enginuity Worldwide](#), to test corn residue as a fuel in August.

Supervising editor is [Sara Shipley Hiles](#). She worked with Heidi Li on this story as part of her Health, Science and Environmental Writing class at the Missouri School of Journalism.

As Ash Trees Die Off, Kansas City Man Primes New Urban Lumber Industry

Ash trees across much of the country are dying as a result of a green beetle called the emerald ash borer. The bug has spread from the upper Midwest imperiling millions of trees.

But there is opportunity amid the destruction. Urban lumber mills that saw up salvaged city trees are on the rise, fertilized by mounting demand for local products and a tsunami of supply delivered by the emerald ash borer.

Did you know that Missouri has 15.4 million acres of forestland?

It came from Asia, by way of Michigan

The emerald ash borer has been at work in Michigan for years.

"Unfortunately, it sneaks up on you," says Jessica Simons, who coordinates the Urbanwood Project. "It slammed us before we knew it was coming."

Simons lives in Anne Arbor, Mich., just a few miles from where the emerald ash borer first showed up from Asia in 2002. And she says the beetles have since killed virtually every ash tree in the area.

"The home that we, that we used to live in. The whole edge property was nothing but ash trees," sighs Simons. "By the time we moved, it was just a row of dead, sad looking snags. It was really upsetting to see how even our own yard had changed."

The scourge has spread across most of the Midwest, and into parts of New England, the South, Canada and Colorado. The beetles landed near Kansas City probably seven or eight years ago, but the city's forester, Kevin Lapointe, says the damage is just starting to show.

"There's a perfect D-shaped hole, right there. There's another one," says Lapointe. "These trees are loaded with these beetles and they're coming out of here this spring."

The trees he's talking about are in a parking lot, just off Tiffany Springs Parkway, near KCI. Most have died back partially, some are in much worse shape.

"You got stone dead one down there, stone dead down there," motions Lapointe. "All these are half dead or dying. And, uh, it's worse than I thought it would be."

The damage isn't uniform. Lapointe motions to city ash trees lining the parkway that appear healthy. He says those trees have been treated against the emerald ash borer. But the treatment's not cheap. Cities and property owners will pay to treat a fraction of the four and a half million ash trees growing in the nine-county Kansas City area. Lapointe says all the rest are as good as dead.

"When this thing really hits, you are going to see thousands of trees dying at the same time," says Lapointe. "And then you have the whole issue of disposal, of all this material that's going to be dying. Where's it going to go? What are you going to do with it?"

Urban Lumber

Tim O'Neill has an answer.

"We're in a lucky spot because the trees are coming down and we're ready to catch them," says O'Neil.

He runs a business called Urban Lumber in Kansas City, Mo., which until recently, was more of a hobby than a job. He milled yard trees for his own wood working projects, and a little beer money.

When the emerald ash borer started hitting this part of the country a company that collects tree waste, Missouri Organic, called O'Neill to see if he'd like to really get busy with this city

timber business. They helped him turn an old metal auto parts warehouse into an urban lumber yard with tall, thick planks of local maple, walnut, and of course ash, filling racks.

"It's just huge, going from an amateur level to a professional level," says O'Neill. "I just can't believe we're sitting in a showroom with hard wood lumber harvested from the city right now. You know, 200 trees waiting to get sawn up, so it keeps getting better and better and better."

O'Neill's mobile saw mill, mounted on a truck trailer, slices a 2000 pound oak log into manageable planks. It's not uncommon to hit bullets, nails or bigger hunks of metal in city trees. They're not practical for industrial use. Most saw mills won't touch them. Urban trees do have character though, and they're free.

Tree trimmers drop trunks off rather than paying to dispose of them, or cutting them up for cheap stuff like firewood and mulch. O'Neill and his crew saw them into planks to build furniture, cabinets and other decorative fixtures.

"The only missing piece is to get the wood into the hands of people who can make the most of it," says O'Neill.

That's where the new showroom comes in.

Urban Lumber's grand opening draws a mix of gnarled wood workers, some missing a finger or two, construction executives in crisp dress shirts, and architects.

"Well, I just think their timing is great," says Mark McHenry, a principal with MSM Architects. "There's so much emphasis these days on local materials, that's a big part of the sustainable movement in my profession, architecture."

McHenry, beaming over his cup of local craft beer, says growing demand for local products, coupled with the enormous dead tree supply on the way should be good for Urban Lumber.

"I think these guys are absolutely going to take off," he predicts.

That's the idea.

O'Neill's already talking about expanding the showroom, and opening branches across the state line in Kansas. All of which sounds great to Ryan Armbrust, with the Kansas Forest Service. Because if companies like Urban Lumber can create a market for city timber, the enormous ash tree die-off might just help fund the next generation urban forest.

"If that dead tree then has a value, that means it's not just something we have to deal with and get out of the way, but potentially, and this is very hypothetical still at this stage, but potentially that value of that tree can be used to support planting programs that can get more trees back into our communities," says Armbrust.

So far, demand would be the weak link in this urban timber cycle. Because with storms getting stronger, with rampant pests and disease killing everything from ash to pine to walnut, the city trees are sure to keep dying and fueling

this industry with steady supply for years to come.

Vietnam on Track to Achieve US\$10-billion Wood Export Target By 2020

HANOI, June 16 (Bernama)- Vietnam's target of earning US\$10 billion revenue from wood and wooden product exports by 2020 is on track, Vietnam News Agency (VNA) reported.

Vietnam Timber and Forest Products Association general secretary Nguyen Ton Quyen said exports to major markets such as the U.S., Japan and European Union (EU) will continue to increase and achieve growth rates of 10 percent, 15 percent and 18 percent respectively.

Wood and timber product exports currently rank fifth among Vietnam's top 10 export commodities.

The sector is expected to generate US\$15 to US\$20 billion in revenue in the next 10 years.

Quyen said bilateral and multilateral agreements, including free trade agreements with the EU and the Trans-Pacific Partnership (TPP) Agreement, are expected to be signed this year which could create good opportunities for Vietnam.

"If Vietnam could export to the 27 EU countries, its market potential will grow," he said.

Quyen said if Vietnam could become a member of the TPP this

year, local enterprises should be prepared to adapt to large markets such as Australia, New Zealand, Canada, U.S. and Japan.

Statistics from the Ministry of Industry and Trade showed export of wood and wood products reported a year-on-year rise of 17.5 percent to US\$2.42 billion in the last five months.

Vietnam has set the target of exporting US\$6.3 billion worth of wood and timber products this year.

Global Timber and Wood Products Market Update - a news brief from Wood Resources International LLC

New Zealand is now the world's largest supplier of softwood logs with exports increasing fourfold to almost two billion dollars in five years, reports the Wood Resource Quarterly

More than 20 percent of the world's softwood log trade originates from New Zealand. In 2013, the country exported 57 percent of the country's timber harvest and the value of the trade had tripled in five years, according to the Wood Resource Quarterly. A majority of the log volumes were destined for China, but South Korea, India and Japan were also sourcing logs from New Zealand last year.

Read more about New Zealand's spectacular rise to become the world largest log exporter in the latest issue of the Wood Resource Quarterly.

Seattle, USA. New Zealand has become the world's largest exporter of softwood logs, with shipments in 2013 accounting for over 20 percent of global trade, according to estimates by WRI. Russia and the US ranked second and third as global log suppliers, each shipping about 15 percent of the softwood logs traded in the world last year.

Not only has the volume of logs exported from New Zealand increased dramatically the past five years, with almost a doubling of exports to over 16 million m3, but the value of the logs has gone up even faster. The average value of exported logs reached a new record high in March this year, which was double the value just four years ago, as reported in the Wood Resource Quarterly (WRQ).

Despite the dramatic increase in sawlogs leaving the country and the closures of a number of manufacturing facilities in New Zealand, domestic log consumption has not changed much the past ten years. In 2013, the forest industry consumed just slightly less logs than the ten-year annual average consumption.

China is, of course, the reason for the surge in log exports and the record high timber harvest levels in New Zealand. In 2013, shipments to China accounted for 72 percent of the total export volume, followed by South Korea, India and Japan. The magnitude of the log export volume cannot be underscored enough. In the 4Q/13, as much as 57 percent of the timber harvest in New Zealand was exported in log form. Such a high share of exports of

unprocessed wood is unmatched in the rest of the world.

While timberland owners have mightily benefited from the strong log export market, domestic sawmills have not seen the same surge in export volumes. In 2008, the total value of exported lumber equaled that of exported logs at approximately 500 million US dollars. Since that time, the export value for lumber has gone up a respectable 30%.

However, this pales in comparison with the value of logs that have gone up fourfold to reach close to two billion US dollars in 2013.

US Lumber Prices To Rise As Increased US House Building Offsets Effect Of Decreased Chinese Construction **By Alicia Perez on June 20 2014 1:29 PM**

An increase in U.S. housing construction is expected to raise significantly the price of lumber by the end of the year, offsetting the depressing effect China's recent downturn in property investment has had on lumber demand.

Capital [Economics](#), a London-based financial research consultancy group, expects prices to increase almost 30 percent, from \$313 per 1,000 board feet to \$400, by the end of 2014. The group attributes the expected rise to increased demand in the U.S. housing market.

Lumber's recent price weakness stems partially from [China slowing down property investments](#). China's "reduction in [commodity](#)-intensive activity" had a hand in the fall in lumber prices, as well as construction metals, because Chinese demand [accounts](#) for roughly 10 percent of North American production exports, Capital Economics said in a note Friday.

Lumber prices fell in May for the first time in two years.

Construction is revving back up in the U.S. but slowed considerably because of the unusually cold winter, [hitting a nearly two-year low in March](#).

While the report states the future of the U.S. housing sector looks positive and a quarter of the mills that closed in 2004 have reopened, "a significant amount of capacity is likely to have been permanently lost, as mills fell into disrepair and skilled labor moved onto other jobs. This will prevent output quickly ramping back up to 2004 levels."

Stronger-Than-Steel Fiber Spun from Wood

By Peter Larsson, KTH

Researchers at KTH have developed a way to make biodegradable cellulose fibers that are stronger than steel or aluminum when weight is taken into account.

The technique draws on the cellulose fibers that make up a tree. Each single fiber is composed of as many as 40 million smaller

fibers, or "fibrils". While these fibrils have been separated from each other before, the KTH researchers and their collaborators in Germany succeeded in doing what no one else has. Fredrik Lundell, one of the researchers, says the team bound these fibrils together into filaments as strong as the original fiber in the tree. The filaments offer a wide range of uses, from manufacturing to clothing.

"We have taken out fibrils from natural cellulose fibers," Lundell says. "Then we have assembled fibrils again into very strong filament. It is about 10 to 20 microns thick, much like a strand of hair."

The research offers potential for creating natural clothing textiles based on wood instead of cotton, or even replacing fiberglass in cars, trucks and boats.

Lundell says that that unlike existing processes for making strands of cellulose, such as rayon, their composition process is environmentally friendly and sustainable. The only other ingredient in the process is sodium chloride – commonly known as table salt – for binding the fibrils together.

"We can control how the fibrils are arranged in the thread," Lundell says. "If they are aligned with the grain line, the material is stiff and strong. Are they not so aligned, this leads to a material that is more elastic."

Lundell says these variations mimic those that occur in nature. A tree is alternately rigid and flexible, in order to withstand the

force of wind and its own weight. As trees grow, the fibril angles change in different parts of the trunk so the tree can handle any stress.

The new technology promises not only biodegradable structural materials but soft natural textiles that could be substituted for cotton, which is widely believed to be close to reaching peak cultivation.

"Cotton cultivation requires large amounts of water," Lundell says. "Take for example the Aral Sea, which more or less disappeared as a result of the cultivation of cotton in Asia. If we are to have a 100 percent sustainable society then we need more materials that have a natural place in the natural cycle."

Lundell adds that the work continues with aim of lining up fibrils so that alternatives to fiberglass can be produced.

"Our research may lead to a new construction material that can be used anywhere where you have components based on glass fibers, and there are quite a few places," he says. "The challenge we face now is to scale up the production process. We must be able to make long strands, many threads in parallel – and all this much faster than today. Nevertheless, we have demonstrated that we know how this should be done, so we've come a long way."

He says that by manipulating the nanostructure and adding other components such as carbon nano tubes in the thread, other applications become possible, such as clothing with embedded electronics.

Söderberg says that by working with fibrils as the basic component, the technology retains the natural structure of cellulose. “That means that the material is 100 percent compatible with nature,” he says. “Cows eat cellulose. Likewise, dead trees and plants are broken down by natural processes.”

The work was mainly carried out at the Wallenberg Wood Science Center at KTH, but in cooperation with Deutsches Elektronen-Synchrotron elektronsynkrotronen (DESY) in Hamburg, Germany.

Söderberg says that much of the current research progress comes as a result of interdisciplinary collaboration. In this case, the team within the Wallenberg Wood Science Center consisted of researchers in fluid physics and researchers in fiber and polymer technology, with Professor Lars Wågberg as the point person. Also involved is Stephan Roth at DESY in Hamburg. The availability of advanced measurement techniques in DESY’s synchrotron light facility, and the Hamburg scientists’ expertise has been crucial, Söderberg says.

Record-Setting May U.S. Hardwood Exports, Red Oak Prices Soften

*By Andy Johnson / Posted:
07/15/2014 9:49AM*

U.S. hardwood lumber exports reached a one-month record of 150.6 million board feet in May 2014, the latest month with available trade data. At \$216.6 million, the value of May exports

also set a record. All told, export volumes and values were up 18% and 33%, respectively, during the first five months of 2014 relative to the same period in 2013.

Shipments to China, Vietnam and Mexico — the largest non-Canadian markets — were each pacing at record annualized levels through May, and shipments to the United Kingdom and Japan were pacing at 13 and 10-year highs, respectively.

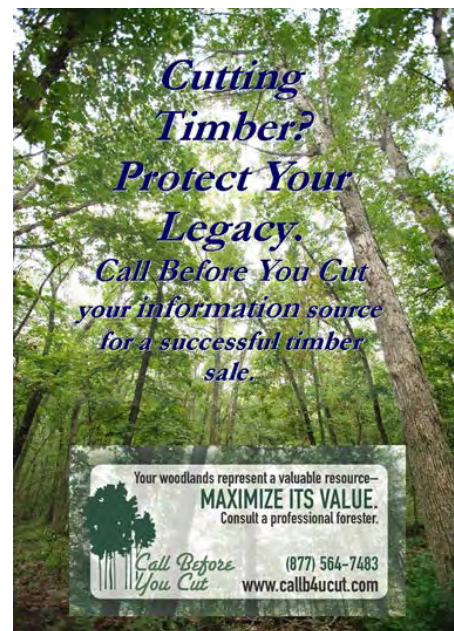
However, exports began to slow toward the end of May and the slowdown was increasingly evident in June, with both North American shippers and foreign buyers reporting reduced trade. Normal seasonal downturns in Europe and some Asian markets; higher inventory levels in many countries; red oak’s increased availability and softening prices; and expectations that other species would become more plentiful in future months all contributed to the slowdown. Buyers pushed back harder against red oak prices in June, and showed the first widespread signs of resistance to additional white oak price increases.

Master Logger Certification

The logger plays a critical role in the harvesting of your timber sale. The Master Logger Certification (MLC) program can make your choice of selecting a logger easier. The MLC program can help provide piece of mind for the landowner. Master Loggers are professional, properly trained, and meet the highest standards placed on the industry today. The MLC program is a

performance based program that recognizes both training and experience. To find a Master Logger in your area visit the following website:

<http://www.moforest.org/MLC/mmldirectory.html>



Missouri Timber Price Trends tracks market prices for Stumpage. Reports on the Stumpage Market are received from Missouri Department of Conservation Resource Foresters and private consulting foresters. Stumpage refers to timber sold on the stump and does not reflect delivered mill prices. These reports should serve as a general guide to track stumpage prices. Landowners should not use this report to replace a timber inventory and marketing assistance as methods of conducting a sale. Missouri Department of Conservation Resource Foresters will be able to provide information on current, local market conditions. Details of all private sales and delivered prices are kept confidential.

Missouri Department of Conservation

Forestry Division Offices

CENTRAL REGIONAL OFFICE573/815-7901

3500 E. Gans Rd., Columbia 65201
Susan Troxel DeWitt, Regional Supervisor x 3478
 CALIFORNIA OFFICE
 410C W. Buchanan St., California 65018... 573/796-0286
 CAMDENTON OFFICE
 783 Thunder Mtn. Rd., Camdenton 65020. 573/346-2210
 FULTON OFFICE – NRCS Office
 4549 State Rd. H, Fulton 65251 573/592-1400
 LINN OFFICE - USDA Service Center
 1315 E. Main St., Linn 65051 573/897-3797

KANSAS CITY REGIONAL OFFICE ..816/525-0300

12405 SE Ranson Rd., Lee's Summit 64082
Mark Nelson, Regional Supervisor x 1239
 BURR OAK WOODS NATURE CENTER
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 CLINTON OFFICE 660/885-6981
 PO Box 368, Clinton 64735 660/885-8179
 DISCOVERY CENTER..... 816/759-7300
 4750 Troost, Kansas City 64110..... 816/759-7305
 SEDALIA OFFICE
 2000 S. Limit, Sedalia 65301 660/530-5500

NORTHEAST REGIONAL OFFICE660/785-2424

3500 S. Baltimore, Kirksville 63501
Danny Hartwig, Regional Supervisor x 6516
 HANNIBAL OFFICE
 653 Clinic Rd., Hannibal 63401 573/248-2530
 KAHOKA OFFICE
 RR 1 Box 16A, 63445.....660/727-2955 x 117
 MACON OFFICE – Mark Twain Water Quality
 2108 US Hwy. 63 Suite D, 63552 660/385-6359 x 128
 UNIONVILLE OFFICE
 28988 US Hwy. 136, 63565 660/947-2439 x 106

NORTHWEST REGIONAL OFFICE ...816/271-3111

701 James McCarthy Dr., St. Joseph 64507
Bryan Gragg, Regional Supervisor x 1438
 ALBANY OFFICE
 508 E. Hwy. 136, Albany 64402..... 660/726-3746
 CHILLICOTHE OFFICE
 15368 LIV 2386, Chillicothe 64601 660/646-6122

OZARK REGIONAL OFFICE.....417/255-9561

551 Joe Jones Blvd, West Plains MO 65775
Gary Oakley, District Supervisor x 224
 AVA OFFICE
 HCR 71 Box 46, Ava 65608..... 417/683-3628
 DONIPHAN OFFICE
 Route 8 Box 8118, Doniphan 63935 573/996-2557
 EMINENCE OFFICE
 HCR 1 Box 177K, Eminence 65466..... 573/226-3616
Terry Thompson, District Supervisor x 223
 HOUSTON OFFICE
 1020 Hwy. 63N, Houston 65483 417/967-3385
 ROLLA OFFICE
 12655 State Route Y, Rolla 65401 573/368-2225
 SALEM OFFICE
 1715 West Highway 32, Salem, 65560 573/729-3182
 VAN BUREN OFFICE
 PO Box 850, Van Buren 63965..... 573/323-8515

SOUTHEAST REGIONAL OFFICE573/290-5730

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Joe Garvey, Regional Supervisor x 4420

ELLINGTON OFFICE

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 FARMINGTON OFFICE
 812 Progress Dr., Farmington 63640573/756-6488
 FREDERICKTOWN OFFICE
 1151 Madison 212, Fredericktown, 63645..573/783-5468
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 PO Box 131, New Madrid 63869573/748-5134
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 2206 W. St. Joseph, Perryville 63775.....573/547-4537
 PIEDMONT OFFICE
 Route 4 Box 1002, Piedmont 63957573/223-4525
David Rowold, District Supervisor x 222
 POPLAR BLUFF OFFICE
 107 Magazine Lane, Poplar Bluff 63901573/840-9788

SOUTHWEST REGIONAL OFFICE ...417/895-6881

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Rod Tucker, Regional Supervisor x 1630
 BOLIVAR OFFICE
 412 S. Killingsworth, Bolivar 65613417/326-5189
 BRANSON OFFICE
 226 Claremont Dr., Branson 65616417/334-3324
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 PO Box 607, Cassville 65625.....417/847-5949
 JOPLIN OFFICE
 201 W. Riviera Dr. Ste. B, Joplin 64804417/629-3423
 LEBANON OFFICE
 2350 S. Jefferson, Lebanon 65536.....417/532-7612
 NEOSHO OFFICE
 1510 Business Hwy. 49, Neosho 64850417/451-4158
Nate Forbes, District Supervisor x 222

ST. LOUIS REGIONAL OFFICE.....636/300-1953

2360 Hwy. D, St. Charles 63304
Cathy deJong, Regional Supervisor x 4129
 POWDER VALLEY NATURE CENTER
 11715 Cragwold Rd., Kirkwood 63122314/301-1506
 ROCKWOODS OFFICE
 2751 Glencoe Rd., Wildwood 63038636/458-2236
Gus Raeker, District Supervisor x 227
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 3220 S. Hwy. 185, Sullivan 63080.....573/468-3335
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 PO Box 157, Warrenton 63383636/456-3368

GEORGE O. WHITE NURSERY.....573/674-3229

14027 Shafer Rd., Licking 65542
George Clark, x 226

RURAL FOREST FIRE EQUIPMENT.417/532-7904

2352 S. Jefferson, Lebanon 65536
Excess Property Coordinator, x 222

CONSERVATION RESEARCH573/815-7901

3500 E. Gans Rd., Columbia 65201
Rob Lawrence, Forest Entomologist..... x 3946
Simeon Wright, Forest Pathologist x 3947
Tom Treiman Resource Scientist..... x 3930
Forest Systems Field Station 417/255-9561
MOFEP Field Office, Randy Jensen 573/663-7130

Missouri Timber Price Trends

Reporting Regions and Sales

